tions of the absolute acceleration in relative motion,' by G. O. James; 'Infinitesimal deformation of the skew helicoid,' by L. P. Eisenhart; 'On integrability by quadratures,' by Saul Epsteen; 'The centenary of the birth of Abel,' by E. B. Wilson; 'The English and French translation of Hilbert's Grundlagen der Geometrie,' by E. R. Hedrick; 'Dickson's linear groups,' by G. A. Miller; 'Buckingham's Thermodynamics,' by E. H. Hall; 'Notes'; 'New publications.' The January *Bulletin* contains: 'The October meeting of the American Mathematical Society,' by F. N. Cole; 'Series whose product is absolutely convergent,' by Florian Cajori; 'Three sets of generational relations defining the abstract group of order 504,' by L. E. Dickson; 'Generational relations defining the abstract simple group of order 660,' by L. E. Dickson; 'The Carlsbad meeting of the Deutsche Mathematiker-Vereinigung, September, 1902,' by C. M. Mason; 'Shorter notices'; 'Notes'; 'New publications.' The February *Bulletin* contains: 'On the transformation of the boundary in the case of conformal mapping,' by W. F. Osgood; 'On the quintic scroll having three double conics,' by Virgil Snyder; 'Surfaces referred to their lines of length zero,' by L. P. Eisenhart; 'Supplementary note on the calculus of variations,' by E. R. Hedrick; 'The synthetic treatment of conics at the present time,' by E. B. Wilson; 'Brown's lunar theory,' by F. R. Moulton; 'The doctrine of infinity,' by E. R. Hedrick; 'Some recent German text-books in geometry,' by P. F. Smith; 'Notes'; 'New publications.'

Bird Lore for January–February has an illustrated paper on 'The Mound-building Birds of Australia,' by A. J. Campbell; an article on 'Making Bird Friends,' by Laurence J. Webster, and one on 'The Return of the Nuthatch,' by E. M. Mead; the 'Christmas Bird Census,' taken in various parts of the United States, and a second series of portraits of members of *Bird Lore's* Advisory Council. The article on 'How to Study Birds,' by Frank M. Chapman, treats of 'The Nesting Season,' and Abbott M. Thayer protests against the use of 'Mounted Birds in Illustration,' a subject which has another side to it, shown in the editor's reply.

The American Museum Journal for February contains a few announcements of material received in various departments, and illustrations of the new ptarmigan groups. The important part of the number is the supplement, by William Beutenmiller, devoted to 'The Hawk-moths of the Vicinity of New York.' Besides a key and descriptions there is an illustration of each species, so that the merest tyro should be able, with the aid of this little hand-book, to identify all. This makes the tenth of the valuable 'Guide Leaflets' issued by the American Museum.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON.

The 367th meeting was held Saturday, February 21.

D. E. Salmon spoke of 'The Recent Outbreak of the Foot-and-Mouth Disease in New England.' He said that the effects of an outbreak of this kind, if not promptly checked, would be so disastrous financially that the Bureau of Animal Industry was always careful to ascertain that the malady reported was really foot-and-mouth disease; having ascertained the facts in the present case, every means was promptly taken to stamp it out. Dr. Salmon described the symptoms of the disease, saying that it was so extremely contagious, that it was readily carried from barn to barn by men, dogs and even pigeons, and once introduced into a herd, every member was pretty sure to be afflicted. While the distemper did not, in very many cases, cause death, it was extremely painful to the cattle afflicted, destroyed their value as beef for many months, and dried up the milk at once. Foreign governments prohibited the importation of cattle from afflicted districts, and as the United States exported annually 400,000 cattle and 100,000 sheep, the immediate effect of an outbreak in our western cattle regions could readily be seen. Furthermore, if there were no cattle for exportation some steamship lines would be compelled to withdraw their vessels. The only practical way to check the

disease was to kill the cattle affected, and in New England something like 2,500 head had been killed and their owners reimbursed by the government. The speaker described the methods adopted to kill the cattle and disinfect the barns, and the great precaution taken by the inspectors not to spread the plague.

H. J. Webber discussed 'Egyptian Cotton in the United States,' saying that as this variety possessed many special advantages, we imported annually $10,000,000 worth. Experiments had been made with a view to raising this cotton in the United States, but at first sufficient care was not taken to ascertain the best soil and climatic conditions. In some localities where the plant grew well, it grew too rankly and furnished but little cotton. The speaker then described the methods adopted by the Bureau of Plant Industry to produce plants adapted to conditions found here, and said that the outlook was very promising. Mr. Webber illustrated his remarks by many samples of various grades of cotton and by photographs.

W. E. Safford gave an account of 'The Fauna of the Island of Guam,' describing in some detail the few mammals and the principal birds, fishes and insects.

F. A. LUCAS.

THE CHEMICAL SOCIETY OF WASHINGTON.

AT a special meeting of the Society on February 5, Dr. M. Gomberg read a paper on 'Tri-ethyl-methyl.' The speaker gave a historical review of the work already published, and also of some work which is soon to appear in print. The subjects taken up were: (1) The preparation and constitution of triphenylmethyl peroxide. (2) The preparation of the triphenylmethyl, and also of its ether and ester derivations, the constitution of which is explained on the assumption of tetravalent oxygen. (3) The preparation and the reactions of triphenyliodomethane. (4) The salt-like character of the triphenylhalogen methanes from the chemical, and from the physico-chemical standpoint. (5) The condensation of triphenylmethyl to hexaphenylethane by means of different reagents. (6) Experimental evidence that metals split off only halogen from triphenylchlormethane. Apparatus and specimens of the various preparations were exhibited.

J. S. BURD,
Secretary.

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.

THE TORREY BOTANICAL CLUB.

THE club held its regular meeting on January 28, at the New York Botanical Garden. In the absence of president and vice-presidents Dr. Britton was called to the chair.

The leading paper was by Mr. R. S. Williams, on 'Some Economic Plants of Bolivia.' He mentioned the great diversity of climatic conditions in Bolivia, and stated that at the higher altitudes frosts occur during ten months of the year. Pasture grasses abound at these elevations. Among the chief crops for the higher agricultural lands are barley, wheat, potatoes and quinoa—the edible seed of a species of the Chenopodiaceæ. Many varieties of corn are cultivated up to an altitude of 5,000 to 6,000 feet, and beans of many kinds are also grown. Rice is the principal grain crop of the lower tropical regions. Sugar-cane grows up to 4,000 feet, and there are large fields of it everywhere. It is crushed by passing the stalks back and forth between rollers turned by oxen. The fruits of the lower country are lemons, oranges, bananas, papayas, cherrimoyas, granadillos and a number of others. A species of sorrel, *Oxalis tuberosa,* is largely cultivated. The tubers are eaten as a vegetable. Tomatoes are raised, but they are poor and small. Peppers are in great variety and are much used. Coffee is grown up to 5,000 feet elevation. A fine quality is produced, but distance from the seaboard prevents its export. There are no wild fruits or nuts of value in the regions visited.

The paper was discussed by Dr. Britton, Professor Selby and others.

Mr. F. S. Earle spoke briefly on 'The Fungus Flora of Jamaica.' Jamaican fungi have been mentioned by various writers, beginning with Patrick Browne in 1755, but the total number of species so far reported from the island is less than one hundred. About five hundred members of fungi were collected

by the speaker during his recent visit to Jamaica. The collection has not as yet been sufficiently studied to estimate the number of species represented in it. Nearly half of the entire number belong to the Polyporaceæ, about a hundred to the Agaricaceæ, thirty to the Thelephoraceæ, but only three to the Hydnaceæ. Of the Ascomycetes fully half belong to the Xylariaceæ.

As a rule, fungi are more abundant at the lower elevations and on the drier parts of the island. In the moist mountain woods, where the conditions are most favorable to the growth of ferns, fungi are comparatively rare.

Mr. Nash exhibited a living flowering specimen of an undescribed species of *Pitcairnia* collected by Dr. Britton on St. Kitts, West Indies. Among its more prominent characters are the absence of spines and the conspicuous whitening of the under side of the leaves. Dr. Britton described the finding of this plant at the summit of Mt. Misery on the rim of an extinct crater. It was growing in a deep carpet of moss and was associated with other bromeliads, including *Pitcairnia alata,* which is a spiny species, and an undescribed *Tillandsia.*

Dr. Howe was called to the chair and Dr. Britton presented resolutions on the recent death of Dr. Timothy F. Allen.

MEETING OF FEBRUARY 10.

In the absence of the president, Dr. Lighthipe was called to the chair.

The paper of the evening was by Mr. Eugene Smith, entitled 'Remarks on Aquatic Plants.' The speaker exhibited a series of specimens of marsh and aquatic plants. The distinction between the two is not sharply drawn, but true aquatics pass their entire life under water or at most only produce their flowers and fruit at the surface. The flowers of true aquatics are never showy. Marsh and aquatic vegetation contains elements that are very diverse from a systematic point of view, including representatives from the lowest to the highest families of plants. The algæ are exclusively aquatic and constitute the greater part of the under-water vegetation. The bryophytes are represented by numerous species, a few of which are true aquatics. The pteridophytes have a few aquatic and semi-aquatic members. Many families of flowering plants include aquatic species. With water plants having both submerged and floating leaves there is usually a marked difference in form between the two. The tissues of aquatics are usually soft and flaccid, since these plants, being supported by the water, do not need to develop woody tissues. The study of aquatic plants has been much neglected. The waters of tropical regions in particular afford almost a new field for exploration and study.

An interesting discussion followed the reading of the paper, many of the members present taking part in it.

F. S. Earle,
Recording Secretary.

DISCUSSION AND CORRESPONDENCE.

THE ST. LOUIS MEETING.

To the Editor of Science: Your recent editorial on the importance of beginning early to make plans for the St. Louis meeting of the American Association for the Advancement of Science and the affiliated scientific societies prompts me to make a few suggestions and to raise one or two questions.

As to the accommodations necessary for a comfortable and therefore profitable sectional meeting there should be for each section of the association: (*a*) a meeting room, (*b*) a lobby or conversation room, and, if possible, (*c*) a coat and toilet room; the three rooms to be close together. It is evident, enough from our experience at various meetings, either that these three elements of comfort are not considered essential by the local committees, or that if they are so considered they can not be secured for all the sections; yet it may be fairly contended that meetings as important as are the gatherings of the sections deserve the reasonably comfortable accommodations above suggested. Further specifications may be made as follows:

Meeting Room.—The table for the presiding officer and the secretary, the platform, blackboard, etc., for the speaker, and the seats for the audience should form a triangle. This arrangement makes it possible for the